CLAIMS

What is claimed is:

1 1. A machine-implemented method, comprising:

2 establishing, within a global operating system environment provided by an operating

3 system, a non-global partition which serves to isolate processes running

4 within the non-global partition from other non-global partitions within the

5 global operating system environment;

6 associating a first resource limit with the non-global partition, wherein the first

7 resource limit indicates a maximum amount of a particular resource that can

8 be allocated to the non-global partition; and

9 associating a second resource limit with a group of one or more processes within the

10 non-global partition, wherein the second resource limit indicates a maximum

11 amount of the particular resource that can be allocated to the group of one or

12 more processes.

1 2. The method of Claim 1, wherein a global partition administrator sets the first resource

2 limit.

1 3. The method of Claim 1, wherein a non-global partition administrator sets the second

2 resource limit.

1 4. The method of Claim 1, further comprising:

2 receiving a resource allocation request for the particular resource from a process

3 executing in the group of one or more processes;

4 determining an amount of the particular resource that can be allocated; and

5 allocating the determined amount to the group of one or more processes .

1 5.   The method of Claim 4, wherein determining further comprises:

2   calculating an available amount of the particular resource, and wherein if the

3   resource allocation request is less than or equal to the available amount, then

4   the determined amount is set to the amount of the resource allocation request.

1 6.   The method of Claim 5, wherein if the resource allocation request is greater than the

2 available amount, then the determined amount is set to the available amount.

1 7.   The method of Claim 5, wherein if the resource allocation request is greater than the

2 available amount, then the determined amount is set to zero.

1 8.   The method of Claim 5, wherein calculating further comprises:

2   calculating a first amount by subtracting the total amount of the particular resource

3   allocated to the non-global partition from the first resource limit;

4   calculating a second amount by subtracting the total amount of the particular resource

5   allocated to the group of one or more processes from the second resource

6   limit; and

7   setting the available amount to the lower of the first amount and the second amount.

1 9.   A machine-readable medium, comprising:

2   establishing, within a global operating system environment provided by an operating

3   system, a non-global partition which serves to isolate processes running

4   within the non-global partition from other non-global partitions within the

5   global operating system environment;

6   associating a first resource limit with the non-global partition, wherein the first

7   resource limit indicates a maximum amount of a particular resource that can

8   be allocated to the non-global partition; and

9   associating a second resource limit with a group of one or more processes within the

10   non-global partition, wherein the second resource limit indicates a maximum

11   amount of the particular resource that can be allocated to the group of one or

12   more processes.

1   10.   The machine-readable medium of Claim 9, wherein a global administrator sets the

2   first resource limit.

1   11.   The machine-readable medium of Claim 9, wherein a non-global administrator sets

2   the second resource limit.

1   12.   The machine-readable medium of Claim 9, further comprising:

2   receiving a resource allocation request for the particular resource from a process

3   executing in the group of one or more processes;

4   determining an amount of the particular resource that can be allocated; and

5   allocating the determined amount to the group of one or more processes .

1   13.   The machine-readable medium of Claim 12, wherein determining further comprises:

2   calculating an available amount of the particular resource, and wherein if the

3   resource allocation request is less than or equal to the available amount, then

4   the determined amount is set to the amount of the resource allocation request.

1   14.   The machine-readable medium of Claim 13, wherein if the resource allocation request

2   is greater than the available amount, then the determined amount is set to the available

3   amount.

1   15.   The machine-readable medium of Claim 13, wherein if the resource allocation request

2   is greater than the available amount, then the determined amount is set to zero.

1   16.   The machine-readable medium of Claim 13, wherein calculating further comprises:

2   calculating a first amount by subtracting the total amount of the particular resource

3   allocated to the non-global partition from the first resource limit;

4   calculating a second amount by subtracting the total amount of the particular resource

5   allocated to the group of one or more processes from the second resource

6   limit; and

7   setting the available amount to the lower of the first amount and the second amount.

1   17.   An apparatus, comprising:

2   a mechanism for establishing, within a global operating system environment provided

3   by an operating system, a non-global partition which serves to isolate

4   processes running within the non-global partition from other non-global

5   partitions within the global operating system environment;

6   a mechanism for associating a first resource limit with the non-global partition,

7   wherein the first resource limit indicates a maximum amount of a particular

8   resource that can be allocated to the non-global partition; and

9   a mechanism for associating a second resource limit with a group of one or more

10   processes within the non-global partition, wherein the second resource limit

11   indicates a maximum amount of the particular resource that can be allocated

12   to the group of one or more processes.

1   18.   The apparatus of Claim 17, wherein a global administrator sets the first resource

2   limit.

1   19.   The apparatus of Claim 17, wherein a non-global administrator sets the second
2   resource limit.

1   20.   The apparatus of Claim 17, further comprising:

2   a mechanism for receiving a resource allocation request for the particular resource

3   from a process executing in the group of one or more processes;

4   a mechanism for determining an amount of the particular resource that can be

5   allocated; and

6   a mechanism for allocating the determined amount to the group of one or more

7   processes .

1   21.   The apparatus of Claim 20, wherein determining further comprises:

2   a mechanism for calculating an available amount of the particular resource, and

3   wherein if the resource allocation request is less than or equal to the available

4   amount, then the determined amount is set to the amount of the resource

5   allocation request.

1   22.   The method of Claim 21, wherein if the resource allocation request is greater than the
2   available amount, then the determined amount is set to the available amount.

1   23.   The method of Claim 21, wherein if the resource allocation request is greater than the
2   available amount, then the determined amount is set to zero.

1 24.   The apparatus of Claim 21, wherein calculating further comprises:

2   a mechanism for calculating a first amount by subtracting the total amount of the

3   particular resource allocated to the non-global partition from the first resource

4   limit;

5   a mechanism for calculating a second amount by subtracting the total amount of the

6   particular resource allocated to the group of one or more processes from the

7   second resource limit; and

8   a mechanism for setting the available amount to the lower of the first amount and the

9   second amount.